

ABSTRACT OF THE DISCLOSURE

Disclosed is an aircraft, configured to have a wide range of flight speeds, consuming low levels of power for an extended period of time, while supporting a communications platform with an unobstructed downward-looking view. The aircraft includes an extendable slat at the leading edge of the wing, and a reflexed trailing edge. The aircraft comprises a flying wing extending laterally between two ends and a center point. The wing is swept and has a relatively constant chord. The aircraft also includes a power module configured to provide power via a fuel cell. The fuel cell stores liquid hydrogen as fuel, but uses gaseous hydrogen in the fuel cell. A fuel tank heater is used to control the boil-rate of the fuel in the fuel tank. The fuel cell compresses ambient air for an oxidizer, and operates with the fuel and oxidizer at pressures below one atmosphere. The aircraft of the invention includes a support structure including a plurality of supports, where the supports form a tetrahedron that affixes to the wing.